Summary of Cholesterol Lowering Therapy

While many organizations (NCEP, AHA, and others) have developed guidelines for screening and treatment of hypercholesterolemia, controversy exists over specific screening recommendations. There is, however, agreement that reduction of elevated cholesterol levels, along with attention to all modifiable cardiac risk factors, will decrease the incidence of cardiovascular disease. Aggressive treatment of diabetic dyslipidemia will reduce the risk of coronary heart disease (CHD) in people with diabetes.

Category of Risk Based on Lipoprotein Levels in Adults

Risk	LDL cholesterol	HDL cholesterol	Triglycerides
Very High	≥ 190 mg/dl	—	≥ 500 mg/dl
High	≥ 130 mg/dl	< 40 mg/dl	≥ 200-499 mg/dl
Borderline	100-129 mg/dl	—	150-199 mg/dl
Low	< 100 mg/dl	≥ 60 mg/dl	< 150 mg/dl

Source: Executive Summary of the Third Report of the National Cholesterol Education Program (NCEP). Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults. Adult Treatment Panel (ATP III)/JAMA 285: 2486-2497, 2001.

Treatment Decisions Based on LDL Cholesterol Level in Adults with Diabetes

Contributing Risk Factor	Medical Nutrition Therapy (MNT)		Drug Therapy	
	Initiation level	LDL goal	Initiation level	LDL goal
Presence of diabetes	≥ 100 mg/dl	< 100 mg/dl	≥ 130 mg/dl	< 100 mg/dl

Sources:
Executive Summary of the Third Report of the National Cholesterol Education Program (NCEP). Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults. Adult Treatment Panel (ATP III)/JAMA 285: 2486-2497, 2001.

American Diabetes Association (Position Statement). Management of Dyslipidemia In Adults With Diabetes. Diabetes Care 26 (Supplement 1): S83-S86, 2003.

1. Medical Nutrition Therapy (MNT) should be attempted for 3 to 6 months if LDL is close to goal (i.e., 100-130), but pharmacological therapy is indicated upfront if LDL is ≥ 130.
2. Since men and women with diabetes are considered to have equal CHD risk, age and sex are not considered risk factors.

ACE Inhibitor Therapy in Diabetes

Evidence suggests that the use of an angiotensin-converting-enzyme (ACE) inhibitor in individuals who are at high risk for cardiovascular events may reduce the rates of these events. This includes people with diabetes. Reductions have been seen in myocardial infarction, stroke, coronary revascularization, cardiac arrest, heart failure, and death rates. Evidence also suggests that treatment with an ACE inhibitor slows the progression of microalbuminuria among patients with type 1 diabetes, even if normotensive. Due to their teratogenic potential, caution is advised when using either ACE inhibitors or angiotensin receptor blockers in women of childbearing age. **Refer also to the Hypertension and Nephropathy sections.**

Source: The Heart Outcomes Prevention Evaluation (HOPE) Study Investigators. Effects of an angiotensin-converting-enzyme inhibitor, ramipril, on cardiovascular events in high-risk patients. N Engl J Med 2000; 342: 145-153.

Aspirin Therapy in Diabetes

Both men and women with diabetes have a two- to four-fold increased risk of dying from the complications of cardiovascular disease. Evidence suggests that aspirin therapy should be prescribed as a secondary prevention strategy and, if no contraindications exist, should also be used as a primary prevention strategy in men and women with diabetes. Use of aspirin has not been studied in individuals under the age of 30.

Source: American Diabetes Association (Position Statement). Aspirin Therapy in Diabetes. Diabetes Care 26 (Supplement 1): S87-S88, 2003.

(continued on reverse)

Recommendations[1]:

1. Aspirin therapy is indicated for all persons with diabetes, unless contraindications exist.
2. Use enteric coated aspirin in doses up to 325 mg, once per day.
3. People with aspirin allergy, bleeding tendency, anticoagulant therapy, recent GI bleeding, and clinically active hepatic disease are not candidates for aspirin therapy.

Note: There continues to be controversy in the literature regarding the interaction between aspirin therapy and ACE inhibitors. [2, 3]

Sources:

[1] *American Diabetes Association (Position Statement). Aspirin Therapy in Diabetes. Diabetes Care 26 (Supplement 1): S87-S88, 2003.*

[2] *Peterson JG, et al. Evaluation of the effects of aspirin combined with angiotensin-converting-enzyme inhibitors in patients with coronary artery disease. Am J Med. October 1, 2000. pp. 371-377.*

[3] *Krumholz, HM, Chen Y-T, Wang Y, Radford MJ. Aspirin and angiotensin-converting-enzyme inhibitors among elderly survivors of hospitalization for acute myocardial infarction. Arch Intern Med. 2001; 161: 538-544.*